



February 9, 2018

*Via Electronic Filing*

Marlene H. Dortch  
Secretary  
Federal Communications Commission  
445 12th Street, SW  
Washington, DC 20554

**Re: GN Docket No. 17-183**  
***Ex Parte* Notice**

Dear Ms. Dortch:

Pursuant to Section 1.1200, *et seq.*, of the Commission's Rules, National Public Radio, Inc. ("NPR") hereby notifies the Commission of the following *ex parte* presentation in the above-referenced proceedings.

On Wednesday, February 7, 2018, Michael Riksen, Vice President for Policy and Representation; Michael Beach, Vice President for Distribution; Greg Lewis, Deputy General Counsel; Maryfran Tyler, Senior Director for Enterprise Strategy and Planning; Joni Lupovitz, Senior Director, Public Policy; and I met with representatives of the Wireless Telecommunications Bureau, the International Bureau, and the Office of Engineering and Technology. These were: Matthew Pearl (WTB); Peter Daronco (WTB); Blaise Scinto (WTB); Paul Powell (WTB); Robert Nelson (IB); Michael Mullinix (IB); Bahman Badipour (OET). In addition, the following FCC staff joined by phone: Becky Schwartz (WTB); Ariel Diamond (WTB); Diane Garfield (IB); Jose Albuquerque (IB); Christopher Bair (IB); and Michael Ha (OET).

In the meeting, we discussed NPR's concerns about possible changes to the Commission's rules regarding the use and licensing of portions of C-band spectrum (3.7-4.2GHz and 6GHz), on which the public radio system depends for reliable distribution of programming to the 1,278 public radio stations that together broadcast public radio programming to 42 million Americans each week. NPR's representatives explained that because the PRSS's downlinks use extremely low-power transmissions, there is a virtual certainty that any other terrestrial use of this C-band spectrum would create interference that would not be remediable and would disrupt broadcasts of public radio programming.

During its discussions, NPR provided the attached materials to the group.

Please direct any questions you may have to the undersigned at 202.513.3275.

Sincerely,

/s/ Adam Shoemaker  
Adam Shoemaker  
Counsel

cc: Matthew Pearl  
Peter Daronco

Blaise Scinto  
Paul Powell  
Robert Nelson  
Michael Mullinix  
Bahman Badipour  
Becky Schwartz  
Ariel Diamond  
Diane Garfield  
Jose Albuquerque  
Christopher Bair  
Michael Ha



## **FCC Mid-Band Spectrum Inquiry**

February 7, 2018

# Why Satellite Delivery Is Essential For Public Radio

- Universal service for the American people
- Public radio's infrastructure relies on satellite distribution to deliver content to and among its interconnected stations, producers and distributors.
- Without satellite delivery for the interconnection system, the U.S.'s nationwide public radio and public safety information distribution systems would cease to exist.
- Public media's infrastructure system provides Americans with timely, critical information before, during, and in the wake of emergencies.
- Satellite delivery is the most cost-effective, secure, and reliable technology currently available to serve this national infrastructure. It is unparalleled in reaching even the most rural and remote regions of the U.S.

# The Public Radio Satellite System (PRSS) Overview

## THE PRSS SERVES THE AMERICAN PUBLIC – AN INDISPENSABLE LINK

### CONNECTS LOCAL PUBLIC RADIO STATIONS + PROGRAMMERS + AMERICAN PEOPLE

The Public Radio Satellite System, managed by NPR, works in partnership with producers, distributors and broadcast stations to provide interconnection for the entire public radio system (NPR members and more).

**BROADCAST SIGNALS REACH 95% OF THE AMERICAN PUBLIC; 300 MILLION AMERICANS**

**Locations:** 50 States, D.C., U.S. Virgin Islands, Puerto Rico and Guam

### THE SYSTEM

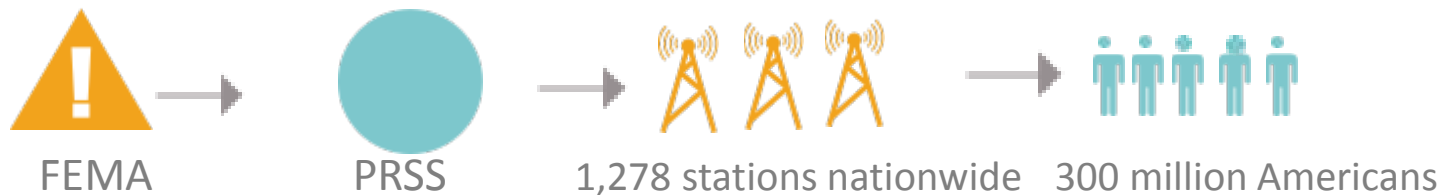
- 1,278 public radio stations
- 100+ program producers (including NPR, APM, and PRI)
- 450K hours of programming a year
- 80% of programming is broadcast *live*
- 42 million American listeners per week
- Used for national and regional emergency alerting

# Public Safety & Emergency Alerts

Public media's infrastructure system provides Americans with timely, critical information before, during, and in the wake of emergencies.

## *How PRSS' Nationwide Emergency Alerting Works*

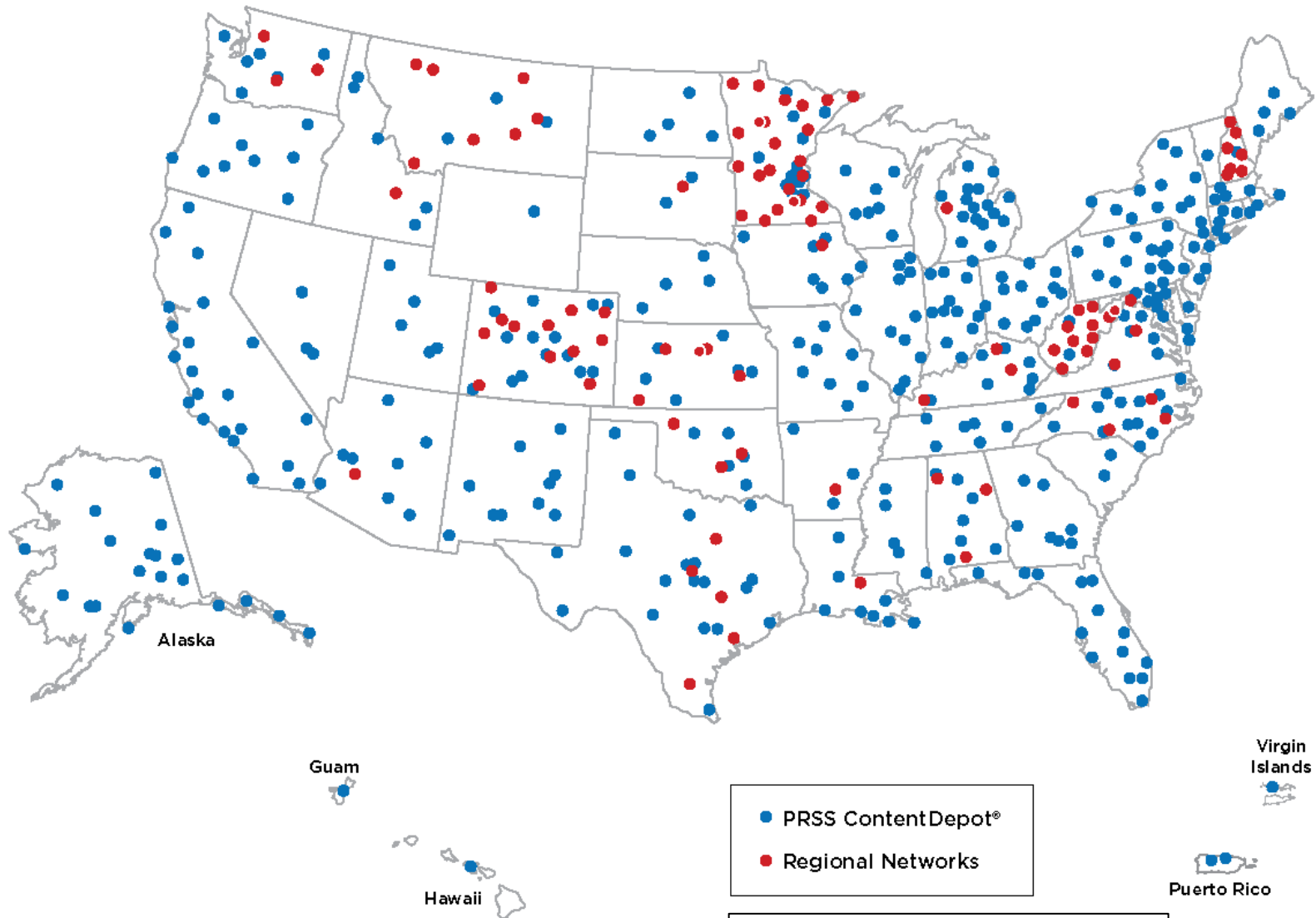
PRSS receives the Presidential-level Emergency Alert System feed directly from FEMA, which it then transmits to 1,278 independently-owned stations nationwide for broadcast across America – *even when power grids and internet services are down.*



# Resilient Communications Before, During & After Disasters

- Redundant, safe satellite network
- Regional emergency networks operate through NPR satellite bandwidth
  - E.g., Minnesota, Louisiana, West Virginia
- Temporary regional networks operate during disasters
  - E.g., Florida Public Radio Emergency Network (FPREN)
- Resilient satellite and public radio system keep local residents informed when disaster strikes – even when power grids, Internet & other communications systems are down, and even in rural and remote areas
  - See NPR Comments: Response Efforts Undertaken During 2017 Hurricane Season, PS Dkt. No. 17-344 (Jan. 22, 2018).

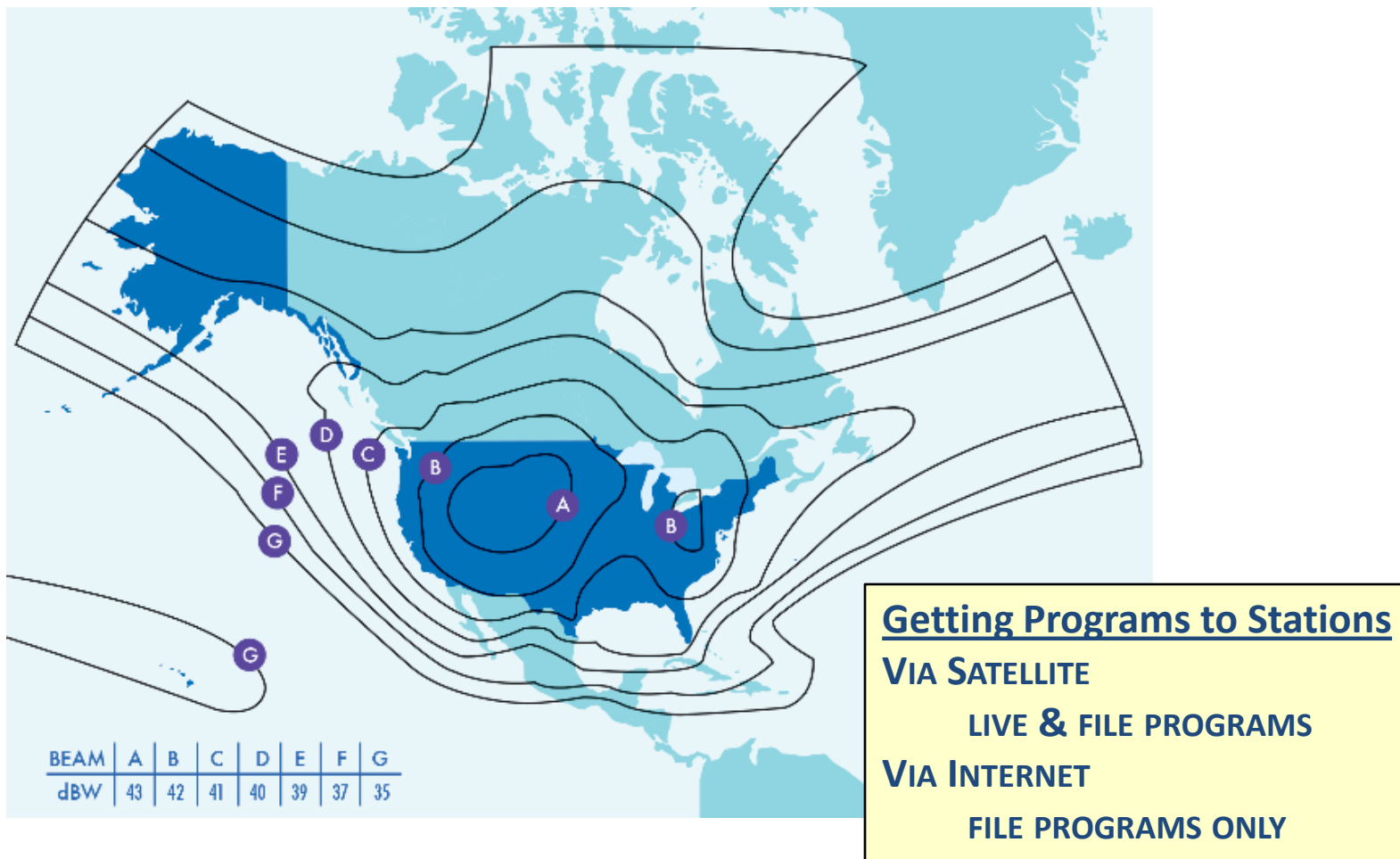
# Public Radio C-Band Downlinks



475 total public radio downlinks



## Reach of the PRSS: Intelsat Galaxy 16 Satellite Transmission Footprint



# PRSS leases satellite transponders from Intelsat on C-Band

## Uplink Frequencies

Galaxy 16/Transponder 1, C-Band	Lower Frequency 5927.00 to Upper Frequency 5963.00
Galaxy 16/Transponder 3, C-Band	Lower Frequency 5967.00 to Upper Frequency 6003.00
Galaxy 16/Transponder 5, C-Band	Lower Frequency 6007.00 to Upper Frequency 6043.00
Galaxy 16/Transponder 7, C-Band	Lower Frequency 6047.00 to Upper Frequency 6083.00

## Downlink Frequencies

Galaxy 16/Transponder 1, C-Band	Lower Frequency 3702.00 to Upper Frequency 3738.00
Galaxy 16/Transponder 3, C-Band	Lower Frequency 3742.00 to Upper Frequency 3778.00
Galaxy 16/Transponder 5, C-Band	Lower Frequency 3782.00 to Upper Frequency 3818.00
Galaxy 16/Transponder 7, C-Band	Lower Frequency 3822.00 to Upper Frequency 3858.00

# Next Generation System

- Congress has provided longstanding, federal funding for PRSS since the 1970s
- Congressional funding initiated for \$53.5 million upgrade
  - 10-year-long project; funded in one-year increments
- Supports complete refresh of current system, including:
  - Improved satellite transponder efficiency
  - Software and equipment at local stations
  - Improvements at the network level (Network Operations Center & Backup NOC)
  - Satellite lease and insurance
- Independent studies show PRSS is utilizing the most cost-effective, secure, and reliable technologies on the market.
  - In June 2016, the Corporation for Public Broadcasting engaged an independent consultant to review the proposed replacement plan for PRSS. The consultant found: “No other alternative discussed or examined – including commercially available options – is more cost effective or likely to result in success.”

# Future Systems Considered

SYSTEM SELECTED

Two potential systems were evaluated

	TERRESTRIAL NETWORK AND SATELLITE / INTERNET DELIVERY SYSTEM	MAJOR REFRESH OF CURRENT SATELLITE DELIVERY SYSTEM
TECHNOLOGY	PRIVATE TERRESTRIAL NETWORK FOR SOME STATIONS AND SATELLITE / INTERNET FOR OTHER STATIONS	MAJOR UPGRADE OF SATELLITE & INTERNET NETWORK FOR ALL STATIONS
COST	\$200+ MILLION, WHERE AVAILABLE	\$53.5 MILLION
SERVICE AVAILABILITY	TERRESTRIAL IS LIMITED; UNAVAILABLE IN PARTS OF ALASKA, SOUTHWEST U.S., MICHIGAN UPPER PENINSULA	COVERS ENTIRE NETWORK

# C-Band vs. Alternatives

## C-Band – Status Quo

- Cost-effective and proven
- Reliable (critical for live programming)
- Reaches stations across continent and beyond
- Virtually eliminates business-continuity risk, with full-band, full-arc licensing that sustains services through satellite disruptions

## Options

**MOVE TO DIFFERENT PART OF SPECTRUM, IF AVAILABLE** – *Some disruption*

Best alternative to status quo

**SHARE SPECTRUM** – *Non-starter, not feasible*

No proven interference protections available

**RELOCATE SELECTED ANTENNAS + FIBER BACK TO STATION** – *Very disruptive*

High operational & business-recovery risk; Lack of control

**MOVE TO ALL-TERRESTRIAL SYSTEM** – *Very disruptive*

No universal service; Adds considerable risk & cost